



MIAMI TOWNSHIP FIRE & EMS CLERMONT COUNTY, OHIO *CARDIAC ARRHYTHMIA PROTOCOLS*



BRADYCARDIA

Historical Findings

1. Age > 14.

Physical Findings

1. Pulse rate < 60 beats/minute.
2. **SIGNS** of rate-related cardiovascular compromise:
 - A. Acute altered mental status.
 - B. Ongoing chest pain.
 - C. Severe shortness of breath.
 - D. Presyncope or syncope.
 - E. Systolic blood pressure \leq 90 mm/Hg.

EKG Findings

1. Ventricular rate < 60 beats/minute.

Protocol

1. Initiate contact; reassure, and explain procedures.
2. Assess and secure the patient's airway and provide oxygen per the airway, oxygen and ventilation protocol.
3. Perform patient assessment, obtain vital signs and begin cardiac monitoring.
4. Acquire a 12 Lead ECG and maintain cardiac monitoring at all times.
5. Prepare for transcutaneous pacing without delay for:
 - A. High-degree blocks (2nd degree type II or third degree AV block).

OR

 - B. Symptomatic bradycardia associated with acute myocardial infarction (AMI).



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6. Initiate transcutaneous pacing as follows:
 - A. The Zoll M & E series are defaulted for *DEMAND* pacing. This means that the pacemaker will only fire to maintain the set rate in coordination with the patient's intrinsic rate.
 - B. Set the rate to 60 bpm.
 - C. Titrate current output up by 2 mA until both electrical and mechanical capture are achieved. Once capture is achieved increase current output an additional 10 %.
 - i. Typical capture is 40-80 mA.
 - D. Patient may be sedated with midazolam (Versed) 2 mg IV titrated to a total of 6 mg or 5 mg IM/IN.
7. Initiate IV access with a saline lock or 0.9% normal saline KVO.
8. Atropine 0.5 mg IV may be administered every 3-5 minutes to a total dose of 3 mg for:
 - A. Symptomatic bradycardia not associated with a heart block.
- OR**
- B. Low-degree blocks (1st degree or 2nd degree type I AV block).
9. If the patient is taking beta-blockers or calcium channel blockers consider glucagon (glucagen) 2 mg IV/IO/IM.
10. If the patient is deemed unstable at any time initiate transcutaneous pacing.
11. If symptomatic bradycardia is unresponsive to atropine and pacing consult medical command for orders for an epinephrine infusion 2-10 micrograms/minute or dopamine infusion 2-10 micrograms/kg/minute.